

PRELIMINARY AMENDMENT
37 C.F.R. § 1.53(b) Continuation of 09/348,005

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- if the transmission rate has just changed , at step 23 the transmit power is increased by [10 log(SIR₂/SIR₁) - δ] dB,

IN THE CLAIMS:

~~Please cancel claims 1-16 without prejudice or disclaimer.~~

~~Please add the following new claims 17-50:~~

17. (New) A method for improving performances of a mobile radiocommunication system using a closed-loop power control algorithm, said method comprising, upon the occurrence of a significant change in the required transmit power, performing a step of changing the transmit power according to a corresponding change in the required transmission quality target value.

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18. (New) A method according to claim 17, wherein said step of changing the transmit power according to a corresponding change in the required transmission quality target value is performed in addition to the power control algorithm.

19. (New) A method according to claim 17, wherein said significant change in the required transmit power includes a change in the transmission rate.

20. (New) A method according to claim 17, wherein said corresponding change in the required transmission quality target value has a predetermined value.

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21. (New) A method according to claim 20, wherein said predetermined value is regularly updated.

22. (New) A method according to claim 17, wherein said transmission quality is represented by a signal-to-interference ratio.

23. (New) A method according to claim 17, wherein said mobile radiocommunication system is of CDMA type.

24. (New) A method according to claim 17, wherein said power control is performed in the uplink transmission direction of said mobile radiocommunication system.

25. (New) A method according to claim 17, wherein said power control is performed in the downlink transmission direction of said mobile radiocommunication system.

26. (New) A mobile station comprising, for performing a method according to claim 24, means for performing one step of changing the transmit power according to a corresponding change in the required transmission quality target value, upon the occurrence of a significant change in the required transmit power.

27. (New) A mobile station according to claim 26, comprising means for performing said step of changing the transmit power according to a corresponding change in the required transmission quality target value, in addition to a step of changing the transmit power according to the power control step of the power control algorithm.

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28. (New) A mobile station according to claim 26, wherein said means include a look-up table, containing predetermined values of corresponding changes in the required transmission quality target value, corresponding to different significant changes in the required transmit power.

29. (New) A mobile radiocommunication network entity comprising, for performing a method according to claim 24, means for correspondingly changing the required transmission quality target value, upon the occurrence of a significant change in the required transmit power.

30. (New) A mobile radiocommunication network entity according to claim 29, wherein said means include a look-up table, containing predetermined values of corresponding changes in the required transmission quality target value, corresponding to different significant changes in the required transmit power.

31. (New) A mobile radiocommunication network entity comprising, for performing a method according to claim 25, means for performing one step of changing the transmit power according to a corresponding change in the required transmission quality target value, upon the occurrence of a significant change in the required transmit power.

32. (New) A mobile radiocommunication network entity according to claim 31, comprising means for performing said step of changing the transmit power according to a corresponding change in the required transmission quality target value, in addition to a step of changing the transmit power according to the power control step of the power control algorithm.

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33. (New) A mobile radiocommunication network entity according to claim 31, wherein said means include a look-up table, containing predetermined values of corresponding changes in the required transmission quality target value, corresponding to different significant changes in the required transmit power.

34. (New) A mobile station comprising, for performing a method according to claim 24, means for correspondingly changing the required transmission quality target value, upon the occurrence of a significant change in the required transmit power.

35. (New) A mobile station according to claim 34, wherein said means include a look-up table, containing predetermined values of corresponding changes in the required transmission quality target value, corresponding to different significant changes in the required transmit power.

36. (New) A mobile station according to claim 28, comprising means for receiving values to be stored in said look-up table, said values being communicated by the network.

37. (New) A mobile radiocommunication network entity comprising, for performing a method according to claim 24, means for communicating said corresponding change in the required transmission quality target value, to mobile stations.

38. (New) A mobile radiocommunication network entity comprising, for performing a method according to claim 24, means for communicating to mobile stations values to be stored in a look-up table containing predetermined values of corresponding changes in the required

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transmission quality target value, corresponding to different significant changes in the required transmit power.

39. (New) A mobile radiocommunication network entity according to claim 38, further including means for regularly updating said communicated values, on the basis of a quality estimation carried out at the network side.

40. (New) A mobile radiocommunication network entity according to claim 33, comprising means for receiving values to be stored in said look-up table, said values being communicated by mobile stations.

41. (New) A mobile station comprising, for performing a method according to claim 25, means for communicating said corresponding change in the required transmission quality target value, to a mobile radiocommunication network entity .

42. (New) A mobile station comprising, for performing a method according to claim 25, means for communicating to a mobile radiocommunication network entity values to be stored in a look-up table containing predetermined values of corresponding changes in the required transmission quality target value, corresponding to different significant changes in the required transmit power.

43. (New) A mobile station according to claim 41, further including means for regularly updating said communicated values, on the basis of a quality estimation carried out at the mobile station side.

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44. (New) A mobile radiocommunication system, including at least one mobile station according to claim 26.

45. (New) A mobile radiocommunication system, including at least one mobile station according to claim 34.

46. (New) A mobile radiocommunication system, including at least one mobile station according claim 41.

47. (New) A mobile radiocommunication system, including at least one mobile radiocommunication network entity according claim 29.

48. (New) A mobile radiocommunication system, including at least one mobile radiocommunication network entity according to claim 31.

49. (New) A mobile radiocommunication system, including at least one mobile radiocommunication network entity according to claim 37.

50. (New) A method according to claim 17, wherein said step of changing the transmit power according to a corresponding change in the required transmission quality target value is performed in addition to a step of changing the transmit power according to the power control step of the power control algorithm.